airPoint-PRO Series Wireless Access Point

Quick Install Guide
Installing the airPoint-PRO Series

airPoint-PRO is a wireless Access Point to provide WLAN connectivity to any PC. It operates at 2.4 GHz ISM band and conforms to IEEE 802.11b specifications. All the access points in this series can provide network connection to any 802.11b Wi-Fi compliant client device.

Currently there are 2 models in the airPoint-PRO series

1. airPoint-PRO Outdoor - Outdoor wireless access point device.
2. airPoint-PRO TOTAL - Outdoor wireless access point integrated with 13 dBi / 9 dBi* flat panel antenna. Now with new enhancements like *Surge Protection* and an *external N connector* for an external antenna option.

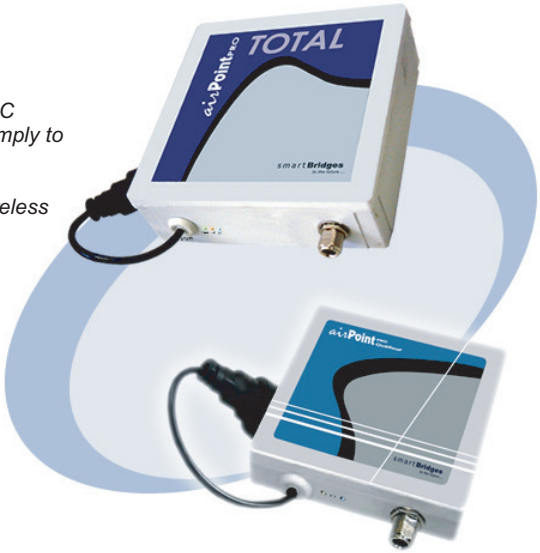
With a high gain external Omni / Directional antenna the airPoint-PRO Outdoor can provide range of upto 32 Kilometers. All the access points in this series provide data rates upto 11Mbps making it one of the fastest Wireless Access Point family in the market. Encryption capability of 64 bits or 128 bits provides network security.

The airPoint-PRO series can be used as an access point, client bridge, wireless bridge and wireless repeater to provide various networking functions. Designed to tolerate extreme weather conditions like heavy rain, freezing cold and hot summer, airPoint-PRO is an ideal solution for outdoor access points and customer premise equipments (CPE). Numerous applications like broadband connectivity to farflung neighborhood homes, wireless networking of PC's in a campus, wireless networking across waterways, roads, valleys and rough terrain are possible. The home PC gets connected to the Internet through the airBridge series and airPoint-PRO series wirelessly.

Note:

* *13dBi integrated antennas comply to FCC standards. 9dBi integrated antennas comply to ETSI standards*

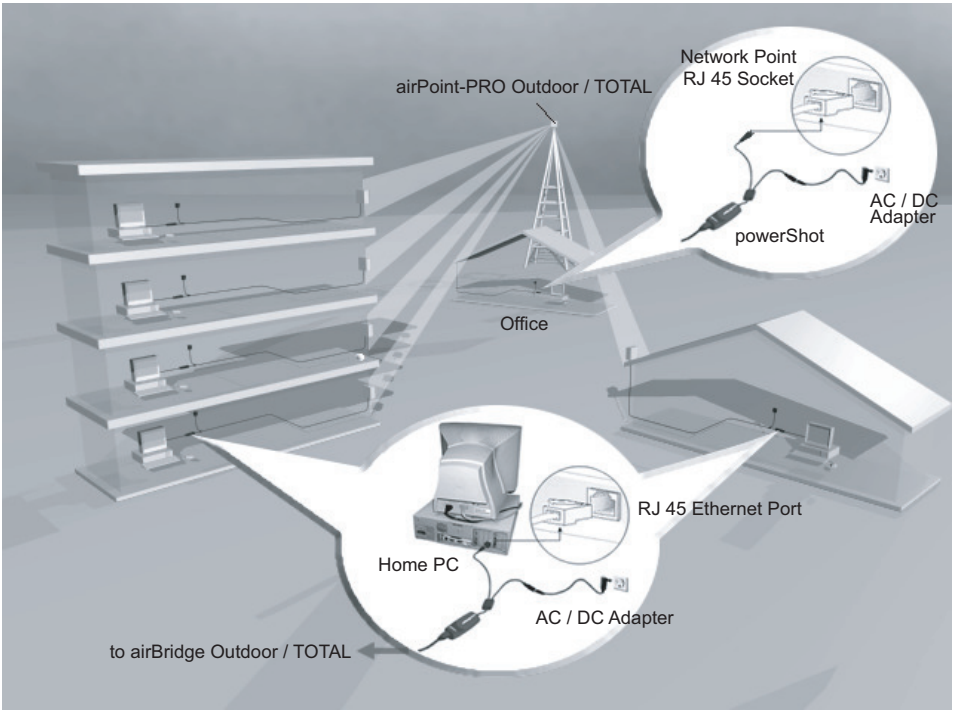
\+ *airBridge series is an ethernet based wireless client*



Contents of Package

airPoint-PRO Outdoor	airPoint-PRO TOTAL
• airPoint-PRO Outdoor Unit • powerShot • AC Adapter • Pole Mounting Kit : U Bracket, Nuts, Washers • Wall Mounting Kit : Wall plugs, Screws • airPoint-PRO Setup Software and User Manual CD • Quick Install Guide • Coax Seal	• airPoint-PRO TOTAL Unit • powerShot • AC Adapter • Pole Mounting Kit : U Bracket, Nuts, Washers • Wall Mounting Kit : Wall plugs, Screws • airPoint-PRO Setup Software and User Manual CD • Quick Install Guide • Coax Seal • Earthing tag

Hardware Installation



for airPoint-PRO Outdoor / airPoint-PRO TOTAL

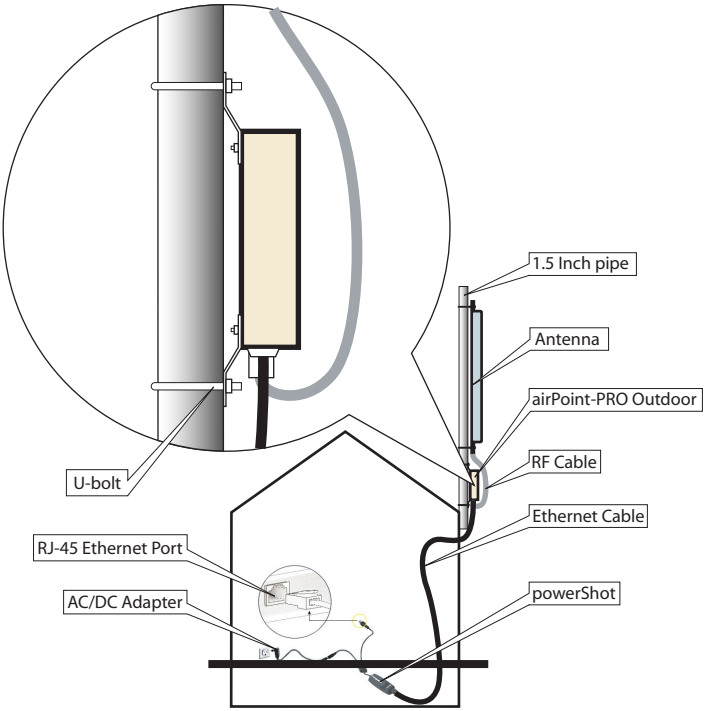
Important note - Earthing Requirements:
Follow National Electric Code NEC 810-20 and NEC 810-21 for this installation.

Mounting the airPoint-PRO Outdoor

Fix the airPoint-PRO Outdoor unit with the U bolts to the steel pipe. Make sure to tighten both top and bottom mounting plates to the pipe with U bolts, nuts and spring washers. Tighten the nuts so that the airPoint-PRO Outdoor does not rotate on the pipe. The mounting should be such that the antenna socket, LED's, ethernet cable outlet etc face downward. The airPoint-PRO Outdoor is weather proof box made to NEMA 4 specs. There are no user adjustable parts inside and it is recommended that the unit is used in the same way it is shipped.

Note:
Do not mount the unit upside down with connectors facing up. In this position water will leak inside through the drain plug.


airPoint PRO Outdoor
smartBridges


1.5 Inch pipe
Antenna
airPoint-PRO Outdoor
RF Cable
Ethernet Cable
powerShot
U-bolt
RJ-45 Ethernet Port
AC/DC Adapter

Mounting the Antenna:

Follow the mounting instructions provided by the antenna manufacturer and mount the antenna on the steel pipe. Antenna should be mounted on the same pipe as the airPoint-PRO Outdoor and positioned above it. The height of the antenna and direction should be in the direction of the Client devices. The antenna socket of the airPoint-PRO Outdoor and the antenna input have to be connected by an RG 8 N Male to N Male cable. Use the coax seal to seal the N connector after fixing RG8 N male to male cable. Prevent rain water entering the RF cable.

Wall mounting:

When client devices are in line of sight from the outer wall of the building then wall mounting can be used. The airPoint-PRO Outdoor can be mounted on the outer wall with the holes provided on the mounting bracket. Drill holes in the wall and insert the wall Plugs. The airPoint-PRO Outdoor then can be fixed to the wall using the wall mount screws. The antenna has to be fixed to the wall using suitable mounting bracket. Rest of the procedures up to alignment follows the previous paragraphs.

Cabling:

Use the ethernet cable that is manufactured for outdoor use. The ethernet cable has to be routed along the pipe, roof, edge of the roof and along the wall into the building, suitable cable ties should be used to hold it rigidly all along its path.

Mounting the airPoint-PRO TOTAL

Attach the mounting arm of the airPoint-PRO TOTAL unit with the 2pcs of U bolts to the pipe. Make sure to tighten both top and bottom U bolts, with nuts and spring washers. Tighten the nuts so that the mounting arm does not rotate on the pipe. Use the external toothed washer between the cabinet bracket and the mounting arm. Use the internal toothed washer with the nut to ensure the TOTAL is tightly held in place.

The airPoint-PRO TOTAL has a high gain in-built directional antenna. Depending on the required signal polarity, use the correct fin for Vertical / Horizontal polarization. Please note that the vertical polarity is indicated on the backside of the device. Mount the unit on the mounting arm with the 1/4" bolt, spring washer and nut and tighten.

Adjust the azimuth angle of the airPoint-PRO TOTAL unit by rotating the mounting arm above the pipe. Adjust the elevation / tilt angle of the airPoint-PRO TOTAL unit by rotating the around the fin.

Use the correct azimuth and the elevation angle to point the airPoint-PRO TOTAL unit towards the remote transmission tower.

Use the Antenna alignment mode in the simpleMonitor software to maximize the received signal strength for the unit.

Mounting the Antenna:

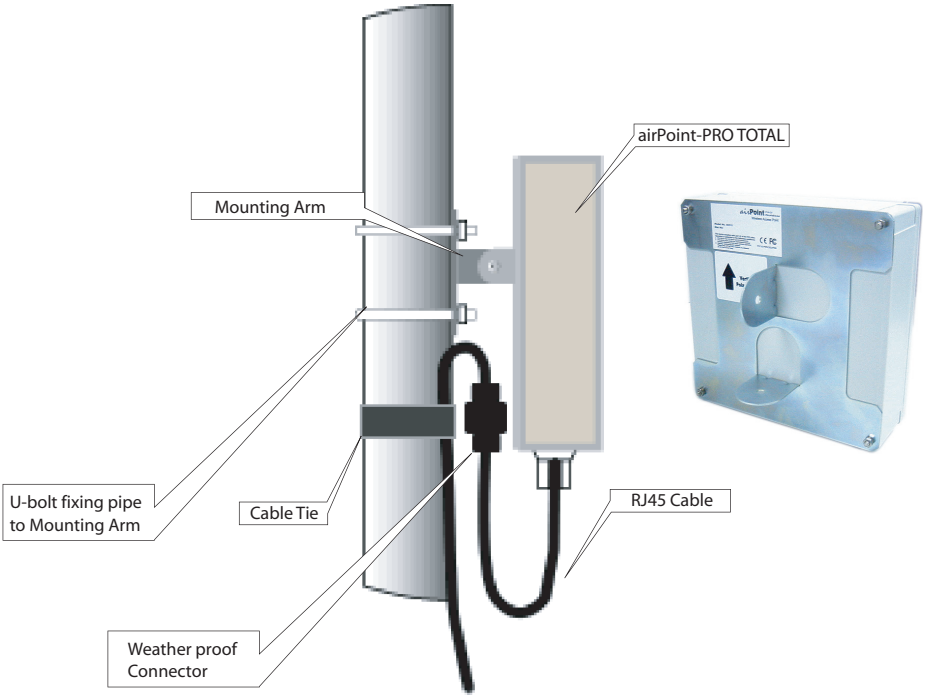
Follow the mounting instructions provided by the antenna manufacturer and mount the antenna on the steel pipe. Antenna should be mounted on the same pipe as the airPoint-PRO TOTAL and positioned above it. The height of the antenna and direction should be in the direction of the Client devices. The antenna socket of the airPoint-PRO TOTAL and the antenna input have to be connected by an RG 8 N Male to N Male cable.

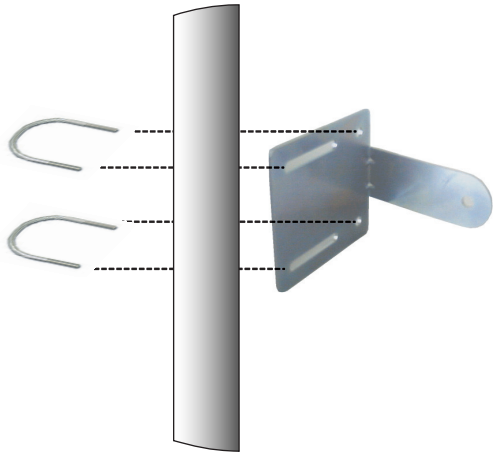
Cabling:

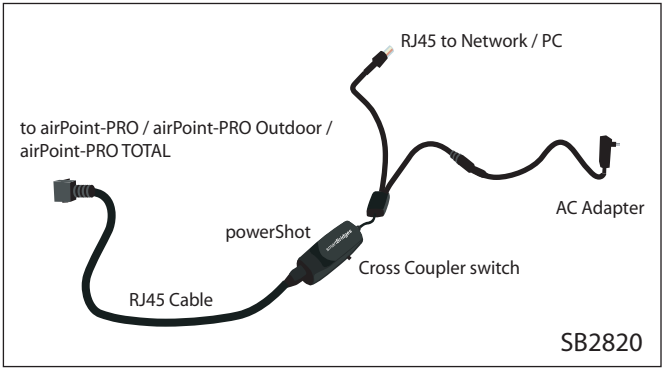
The airPoint-PRO TOTAL is terminated a weatherproof RJ45 female connector for outdoor use. Refer to the cable and connector installation instructions placed inside the weatherproof connector for more information. The user can connect required length of suitable ethernet cable to connect the airPoint-PRO TOTAL to the user's PC / Network.

Use the external toothed washer between the cabinet bracket and the mounting arm.

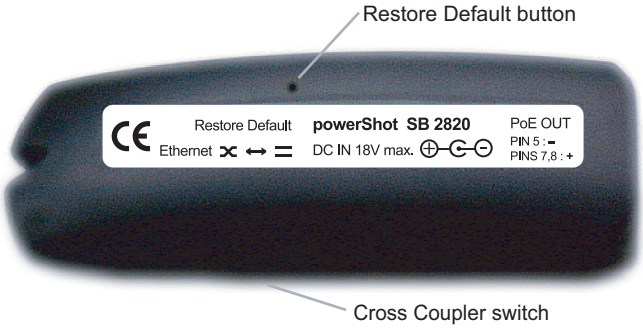
Use the internal toothed washer with the nut to ensure the TOTAL is tightly held in place.


airPoint-PRO TOTAL
Mounting Arm
U-bolt fixing pipe
to Mounting Arm
Cable Tie
RJ45 Cable
Weather proof
Connector





Note:
Restore Default button at the bottom side of the powerShot should be used to restore the device back to factory / WISP defaults.



Grounding:

The internal ground of the TOTAL is bought out to an earthing stud at the bottom side of the unit. Crimp the 10 AWG wire to the earth tag and secure the earth tag on to the earthing stud tightly with the M6 nut provided. Ensure that the other end of the 10 AWG wire is grounded to the earth at the power ground of the premises.

Note:
Grounding has to be done before mounting the TOTAL on wall/pole.

Connecting the airPoint-PRO series using Power Over Ethernet:

The airPoint-PRO series is powered through the ethernet cable itself. This mode of operation gives flexibility for the user to position the airPoint-PRO at any location for best radio coverage.

Connect one end of the power cord to the powerShot and the other end in the power socket.

Connect the RJ45 cable to network / PC.

Connect the RJ45 cable between the powerShot and airPoint-PRO Outdoor / airPoint-PRO TOTAL. This cable will provide both ethernet signals and power.
Cross coupler switch in SB2820 powerShot selects straight or crossed ethernet connection.

For cable lengths in excess of 50 meters it is recommended that the AC adapter should be of 18 Volt type. Normally 12 V AC adapter is provided with the airPoint-PRO.

Software Installation

System Requirements:

Computer with Windows 98/ME/NT/2000/XP with working network card

Installing airPoint-PRO Setup Software:

Please insert the Setup Software CD into the CD-ROM drive of your PC. The CD will run automatically. If it doesn't autorun, please browse the CD and double click on **index.htm**.

- Select the appropriate product from the drop-down list and click the ***Go*** button.
- Click on the ***Setup File*** link. You should see the ***File Download*** dialog box.
- Select ***Open*** or ***Run this program from its currrent location*** to start the setup.
- The setup will install all the necessary files in the "C:\Program Files\smartBridges\airPoint-PRO" directory.
- The installation will create the following shortcuts in the Program Menu at smartBridges\airPoint-PRO for easy accessibility of Setup software.
  - Firmware upgrade utility allows upgrading of firmware.
  - simpleMonitor allows configuration of the airPoint-PRO.
  - User Guide shows the User Guide in HTML form.
  - Web Register opens the product registration of airPoint-PRO on smartBridges website.
  - Known Issues with the Software, Firmware and Hardware.
  - Uninstall the Setup Software.
- After Installing please restart the PC if asked.

Uninstalling airPoint-PRO Setup Software:

Click on the shortcut "***Start*** > ***Programs*** > ***smartBridges*** > ***airPoint-PRO*** > ***Uninstall airPoint-PRO***" and it will uninstall the setup software from your PC.

Note:
airPoint-PRO, airPoint-PRO Outdoor and airPoint-PRO TOTAL can be configured using the same software which is referred to as airPoint-PRO.

Configuring the airPoint-PRO

For Windows 98 / ME / NT / 2000 / XP

The factory default parameters for airPoint-PRO

- DHCP Client : Enabled (IP will be acquired from the DHCP Server on the LAN.)
- Administrator Password : public (case sensitive)
- User password : public (case sensitive)
- ESSID : airPoint-PRO / Outdoor / TOTAL
- ESSID Broadcast : Enabled
- Name : airPoint-PRO / Outdoor / TOTAL
- Authentication type : open key
- WEP keys : None
- Preamble : Long
- Authorized Clients : None
- Operating Channel : Country Specific
- Regulatory Domain : Country Specific
- Default Operating Mode : Access Point

Hardware Restoration of Factory Settings

Please see page 13

- **Configuring airPoint-PRO**

a) Configuring airPoint-PRO connected to Ethernet LAN

Connect the airPoint-PRO to your normal LAN. Make sure the power to the airPoint-PRO is ON.

Note 1: By Default airPoint-PRO runs a DHCP Client. So the IP Address will be acquired from the DHCP Server.

Note 2: In case if the DHCP Server is not available then airPoint-PRO will time out the search for DHCP Server after 1 minute and use the last obtain IP address. So in that case the airPoint-PRO can be searchable only after 1 min. This situation will arrive if you give the static IP address to your PC and connect airPoint-PRO directly to the PC with DHCP Client running in it.

If your LAN doesn't have a DHCP server but instead you run the PCs with Static IPs then you need to assign a Temporary IP Address to the PC to connect to the airPoint-PRO. (See Appendix A to assign a Temporary IP address.)

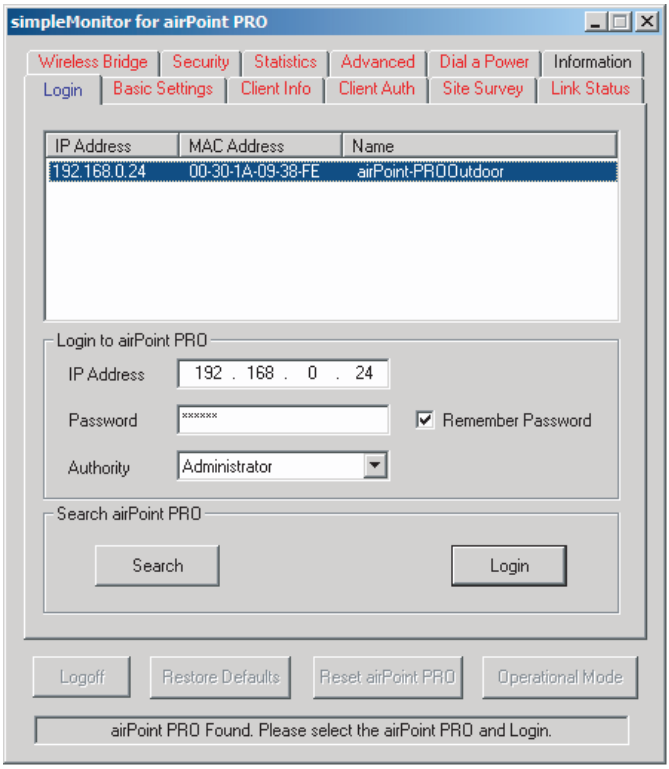
b) Configuring airPoint-PRO using a standalone PC

Connect the airPoint-PRO to the PC using cross CAT5 cable. You can convert straight cable to cross using a cross connector provided. Make sure the power to the airPoint-PRO is ON. To use the simpleMonitor for configuring airPoint-PRO, you must assign a temporary IP address to the computer. (See Appendix A to assign a Temporary IP address.)

Using simpleMonitor

1. ***LOGIN TAB***

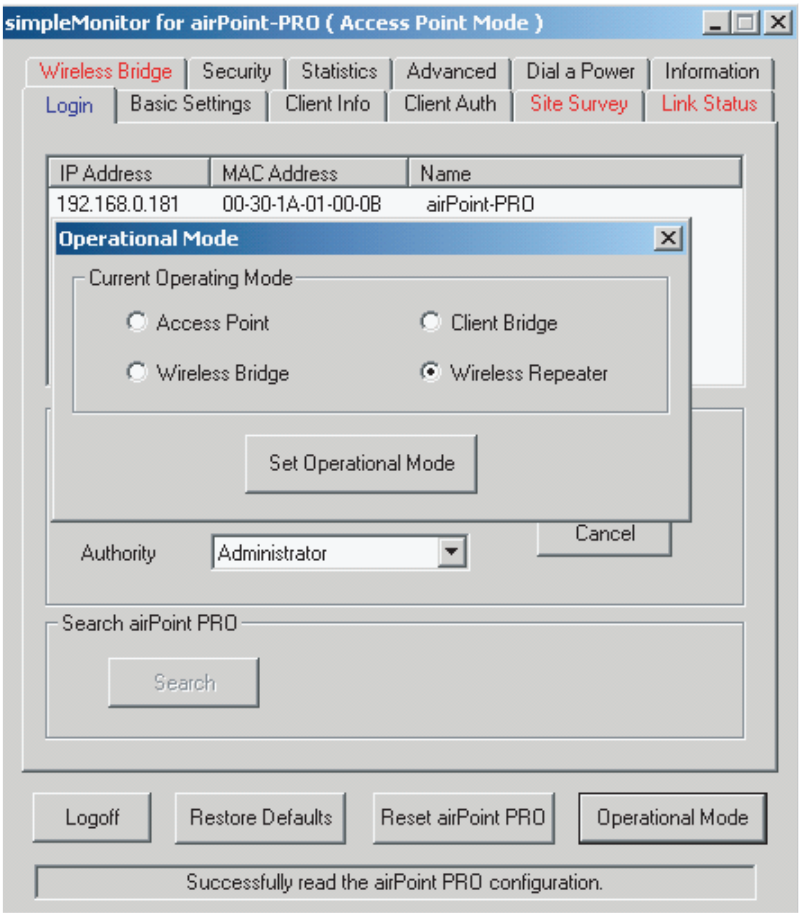
- Start the simpleMonitor by clicking on the shortcut ***Start*** > ***Programs*** > ***smartBridges*** > ***airPoint-PRO*** > ***simpleMonitor***.
- Click on ***Search*** to find the airPoint-PRO you have connected.
- If the airPoint-PRO is found then it will show the airPoint-PRO entry as below and request you to select and Login.
- Click on IP address of the desired device, you can enter the valid IP address without searching the airPoint-PRO.
- Key in the Password (Default is "public").
- Select the desired Authority (User/Administrator).
- Click on Login button to log in to airPoint-PRO.



2. ***SETTING THE OPERATIONAL MODE OF AIRPOINT-PRO***

The airPoint-PRO can operate in four different Modes, namely

- ***Access Point*** - In this mode the airPoint-PRO is operating as a normal 802.11b compliant Access Point. Client Info and Client Auth Tabs of simpleMonitor will be enabled in this mode.
- ***Client Bridge*** - In this mode the airPoint-PRO is operating as ethernet client, and it can associate with another airPoint-PRO. SiteSurvey and Link Status Tabs of simpleMonitor will be enabled in this Mode. This Ethernet Client supports the multiple PCs. See the Application notes for more details.
- ***Wireless Bridge*** - In this mode airPoint-PRO can bridge 2 or more LANs wirelessly. This Mode support 2 subModes as *Point to Point* and *Point to MultiPoint*.



1. Point to Point - This mode lets one airPoint-PRO talk to another airPoint-PRO wirelessly linking two Ethernet LANs behind together.

2. Point to MultiPoint - This mode lets multiple airPoint-PRO linking multiple Ethernet LANs.

Wireless Bridge Tab of simpleMonitor will be enabled in this mode.

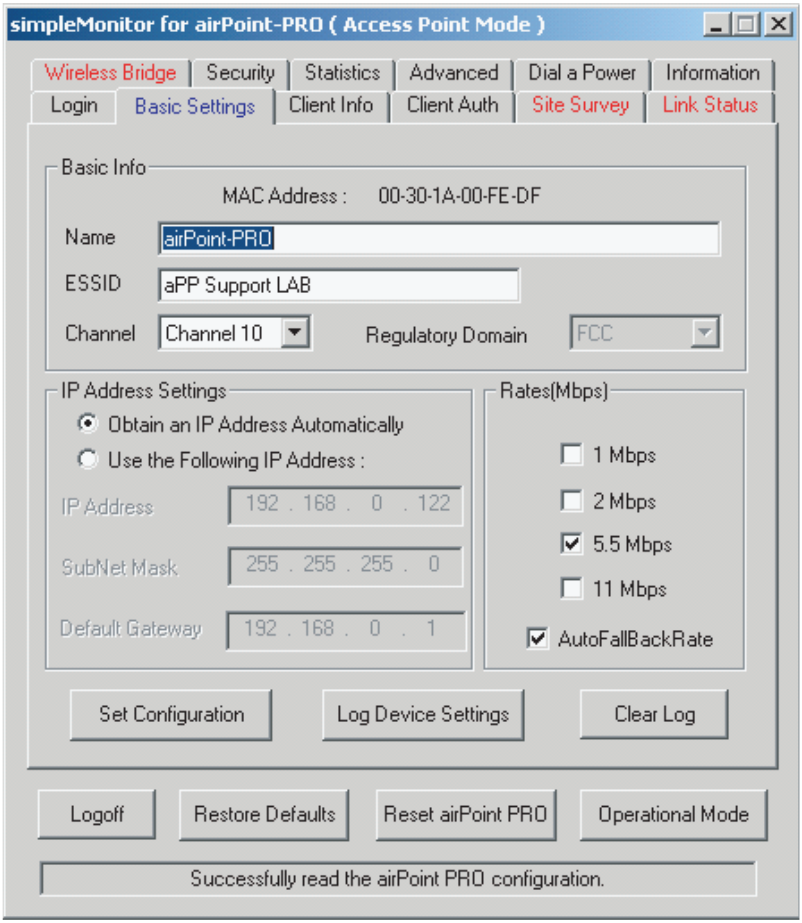
- ***Wireless Repeater*** - In this Mode airPoint-PRO radio act as Access Point and wireless client simultaneously. The Access Point serves the local clients and client connects to the parent Access Point. ***Client Info***, ***Client Auth*** and ***Link Status Tabs*** of simpleMonitor will be enabled on this mode. Please see the application note for more details.

Immediately after logging into airPoint-PRO you can set the above wireless repeater modes. The default operating mode is *Access Point*. To view or modify the operating Mode, click on the ***Operational Mode*** button on the simpleMonitor.

Select the desired operating mode and Press ***Set Operational Mode*** button. You need to login again after setting the operational mode.

3. ***BASIC SETTINGS TAB***
   - Select the ***Basic Settings*** Tab.
   - Enter the desired ESSID & Access Point Name, Channel and Rate in the respective tabs.
   - The DHCP client can run on the airPoint-PRO. If you wish to use the DHCP client then select "*Obtain IP Address Automatically*" otherwise you have to manually enter the IP Address, IP Mask and Gateway values.
   - Click on ***Set Configuration*** to save the Configuration. Once the configuration is saved, you will be logged out of simpleMonitor.
   - All the operational Settings of the airPoint-PRO can be stored in the "DeviceDataLog.txt" file, by pressing ***Log Device Setting*** button. These can be used later for reference.
   - The contents of the file "DeviceDataLog.txt" will be cleared by pressing ***Clear Log*** button.
   - Close simpleMonitor application, and relogin into the airPoint-PRO Outdoor (Follow Step 1).

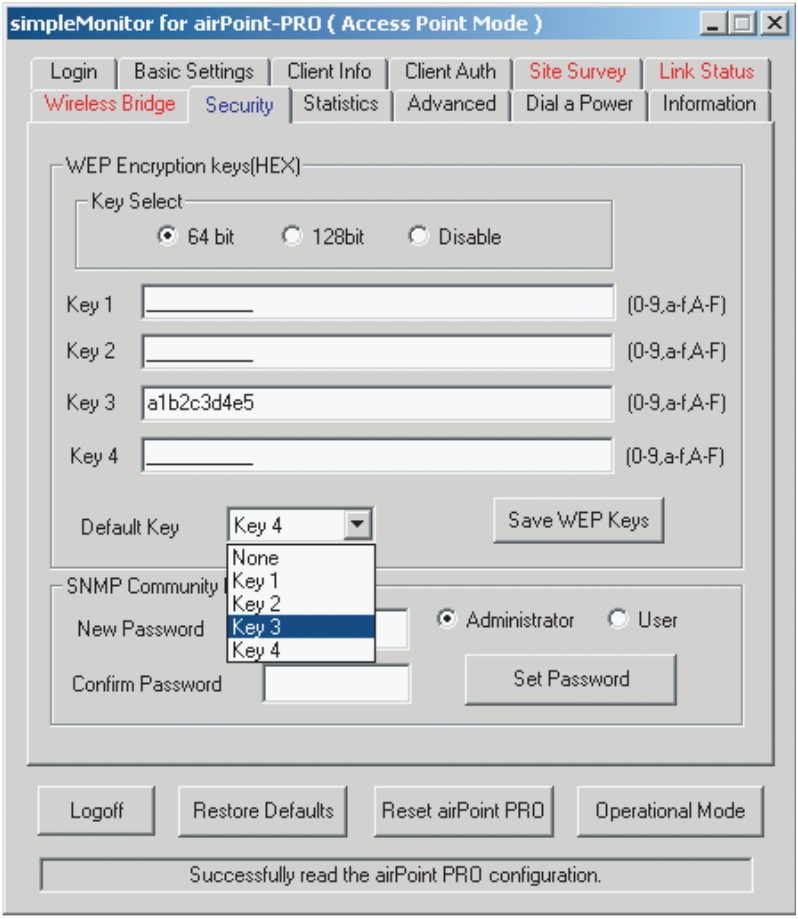
Note:
The Channel settings here is the operational channel which can be changed to whatever channel setting required, however the Regulatory domain is a default value of the device which can be changed from the Advanced Tab.


simpleMonitor for airPoint-PRO (Access Point Mode)
Wireless Bridge
Security
Statistics
Advanced
Dial a Power
Information
Login
Basic Settings
Client Info
Client Auth
Site Survey
Link Status
Basic Info
MAC Address : 00-30-1A-00-FE-DF
Name
airPoint-PRO
ESSID
aPP Support LAB
Channel
Channel 10
Regulatory Domain
FCC
IP Address Settings
Obtain an IP Address Automatically
Use the Following IP Address :
IP Address
192 . 168 . 0 . 122
SubNet Mask
255 . 255 . 255 . 0
Default Gateway
192 . 168 . 0 . 1
Rates(Mbps)
1 Mbps
2 Mbps
5.5 Mbps
11 Mbps
AutoFallBackRate
Set Configuration
Log Device Settings
Clear Log
Logoff
Restore Defaults
Reset airPoint PRO
Operational Mode
Successfully read the airPoint PRO configuration.

4. ***SECURITY TAB***

The airPoint-PRO can operate in four different Modes, namely

- By default encryption is disabled which means the communication is not secure. In case you want to have a secure communication, ensure that the WEP encryption keys are set.
- To set the encryption keys click on security tab:
  - Select the Desired Encryption Key (64Bit/128Bit).
  - Enter HEX data (0~9, A~F) as this is the default settings.
  - Select the desired key to be used (Default Key).
  - Save the WEP Keys....
  - You will get a pop up window with the message '*WEP Encryption Keys Saved Successfully*'.



Note:
For WEP encryption the default format is HEX format. Incase of any wireless clients using the ASCII keys for the WEP, use the ASCII to HEX converter table for same. See Appendix B.

> *Note:*
> The Authentication type must be the same on the Clients and on the airPoint-PRO. All shared keys on the wireless station must be the same as those on the Clients that is associated with the airPoint-PRO.

5. ***ADVANCED TAB***

Regulatory Domain Settings: You can change the Default Regulatory Domain and Default Channel of airPoint-PRO.

Configuration Port: airPoint-PRO can be configured from ethernet, wireless or both interfaces using this option. Please remember to select at least one option.

Transmission and Reception Antenna: Allows the user to select between Antenna A and Antenna B for reception of signals. Diversity options will select the Antenna with best possible signal reception sensitivity (recommended) if additional antenna is connected.

airPoint-PRO Outdoor:
1. Antenna A - Internal Antenna (this is not used)
2. Antenna B - External Antenna

airPoint-PRO TOTAL:
1. Antenna A - Internal Antenna (here the 9dBi or 13dBi Antenna is used)
2. Antenna B - External Antenna (provision is made with N Type connector)

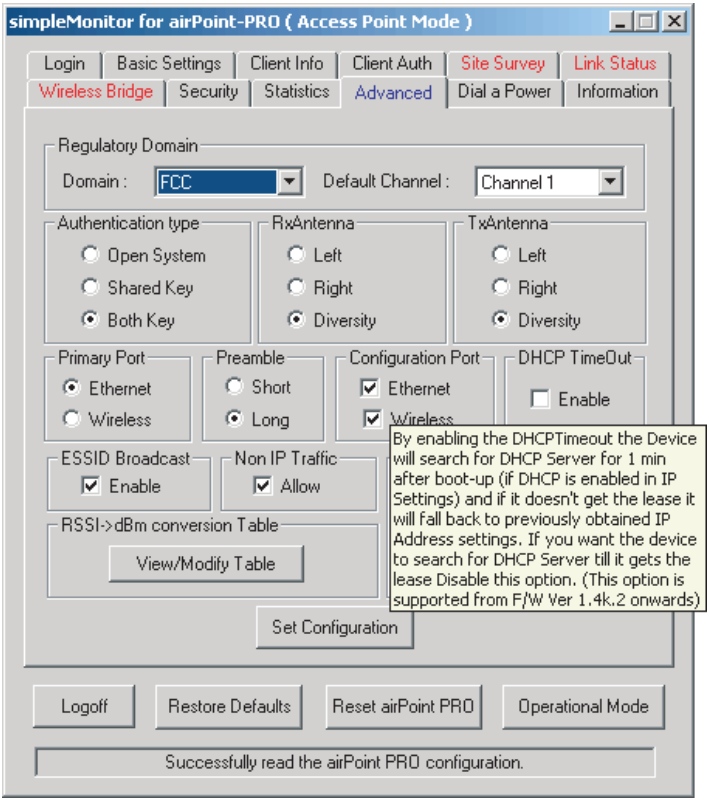
Authentication Type: The authentication type defines configuration options for the sharing of wireless networks to verify identity and access privileges of roaming wireless network cards.

1. **Open System**: With this setting any station without WEP enabled in the WLAN can associate with an Access Point and receive and transmit data. If WEP is enabled, the key must match on both the CPE and the AP.
2. **Shared Key**: With this setting only stations using a shared key encryption identified by the Access Point are allowed to associate with it.
3. **Both Keys**: Open and Shared Key supported.

   Specifies that DHCP server and Default Gateway are reachable from ethernet interface of airPoint-PRO.

If the Non IP Traffic is allowed, all the traffic like NetBEUI, SPX/IPX will be passed through airPoint-PRO. SSID of the airPoint-PRO will be broadcasted if **ESSID broadcast** option is enabled.

If any changes are made in the above configuration, you need to Click on ***Set Configuration*** in order to save them.



Note: *The default setting is internal antenna (shipping condition), whenever an external antenna is connected change the selection to Antenna B.*

The RSSI values are shown in dBm in ClientInfo and Associated AP Info Tab as per the internal formula. If you want your specific values to be shown in there, please store them in the table and set the option as "User Defined" from the Advanced TAB.

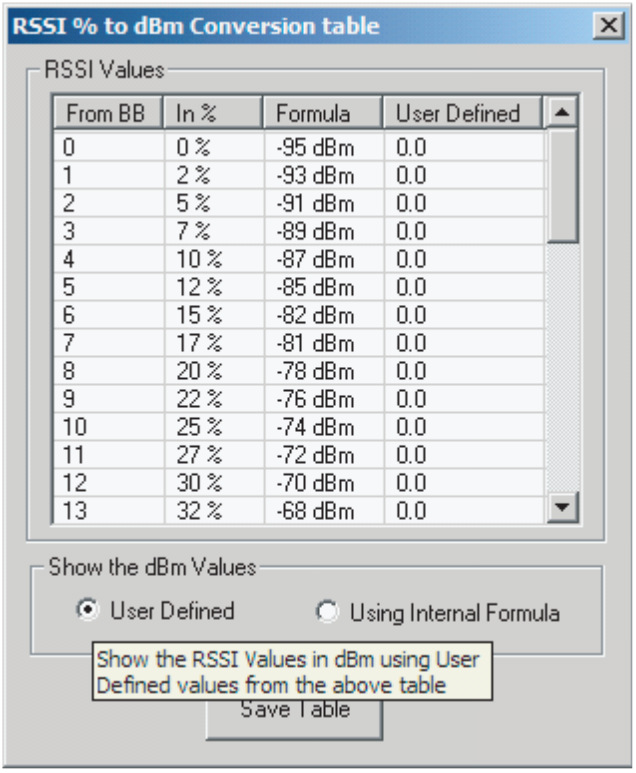
Configuring the airPoint-PRO in Access Point Mode

In this mode the airPoint-PRO is operating as a normal 802.11b compliant Access Point. ***Client Info*** and ***Client Auth Tabs*** of simpleMonitor will be enabled in this Mode. The important tasks in this mode are

1. Getting associated Client's Information.
2. Authorizing the Clients.

Getting associated Client's Information

Select the ***Client Info Tab*** of simpleMonitor to get the associated Client's Information.

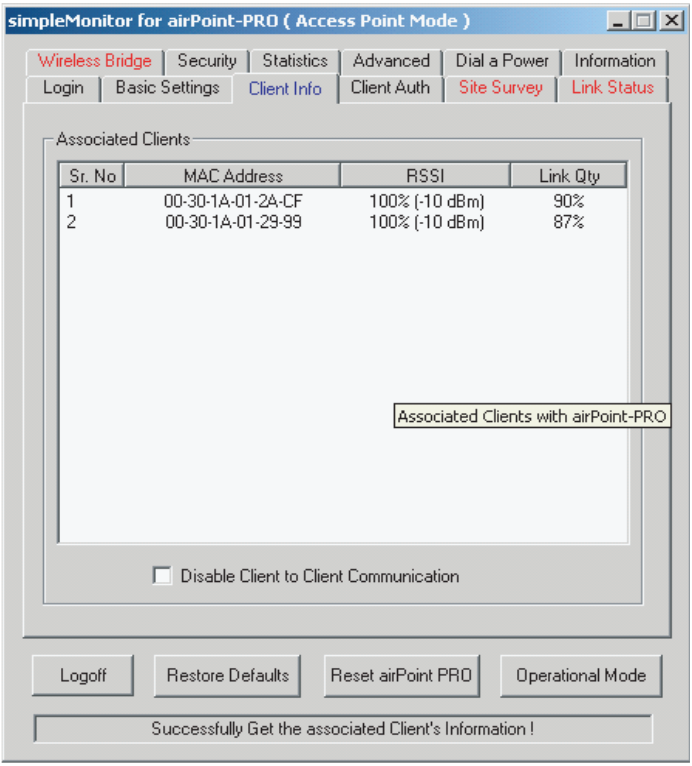


The following information about all the associated clients is available in real time; the values are refreshed after every 5 seconds.

- MAC Address
- Received Signal Strength Indication (RSSI) in both % and dBm
- Link Quality
- IP Address is shown only if some traffic exists between airPoint-PRO and the wireless client, otherwise it is shown as Unknown.

  If you are using the airBridge (F/W Ver 0.01.04 onwards) as wireless client, you may see the MAC address of airBridge and the IP Address of either airBridge or any PC behind it, based on the first traffic. The airBridge replaces all the packets from ethernet to wireless with its own MAC address.

  If the traffic doesn't exist between the clients and airPoint-PRO then you can create the traffic (Ping) and make the values refresh by clicking "Refresh" button. If the IP address is not reachable then the values may not Refresh.



Note: *Client to Client communication TAB is disabled in the repeater mode*

If the client gets disassociated from the airPoint-PRO due to any reason (power down etc) you will continue to see the entry in the list for upto 5 minutes, before it is removed from the list.

You can Enable/Disable the communication between the individual clients by clicking the ***Disable Client to Client Communication*** check box.

Note: - 128 Clients can associate simultaneously with airPoint-PRO.

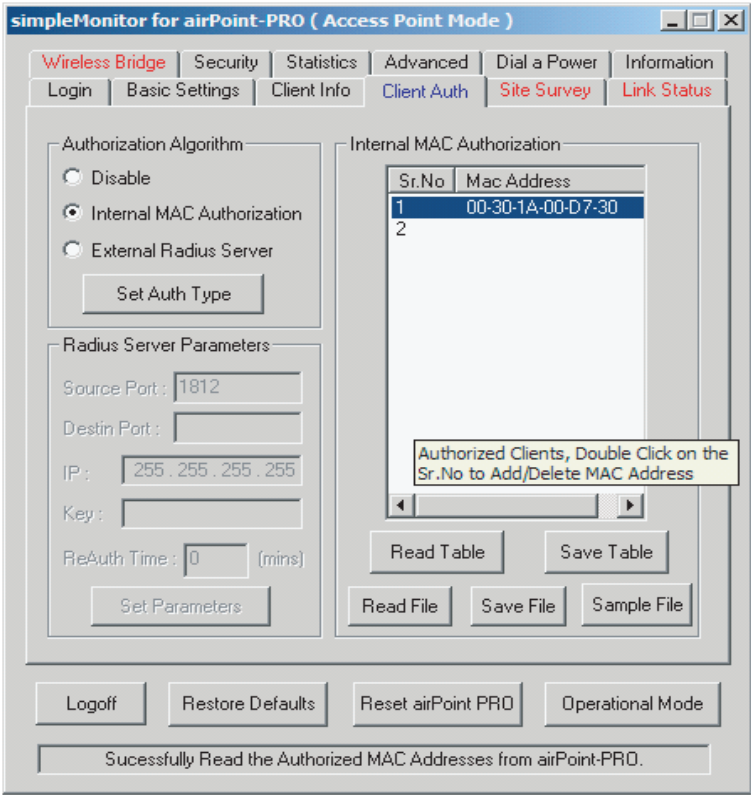
Authorizing the Clients for airPoint-PRO

You can pre-authorize the clients associating with airPoint-PRO by selecting the ***Client Auth Tab*** of simpleMonitor. airPoint-PRO supports two different authorization schemes as below. Please select between the schemes or you may disable the authorization algorithm.

- Internal MAC based Authorization
- External Radius Server Authorization

Internal MAC based Authorization

Note: - 680 Clients can be authorized with airPoint-PRO. The authorized client table can be retrieved from the Access Point by using ***Read Table*** option. If the entries are found then it will be displayed on the screen or one need to key in the entries. Entries can be entered one by one manually or by using the entries in the file.



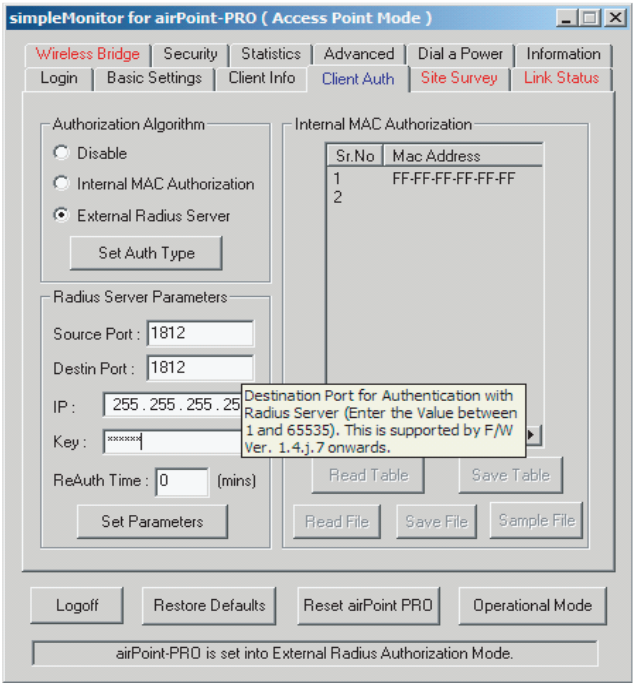
External Radius Server Authorization

To authorize clients using the External Radius Server please key in the following parameters and Click on ***Set Parameters*** button.

- Source Port (Default Port is 1812)
- Destination Port (supported in F/W 1.4.j.7 onwards)
- Radius Server IP Address
- Secret Key
- Reauthorization Time in minutes (0 to 65535)

If you set the Reauthorization Time as 0 minutes, then reauthorization mechanism is disabled, else all the associated clients will be reauthorized with the Radius Server after the Reauthorization Time.

Please refer to Application note for Radius Server Setup and usage with airPoint-PRO for more details.



Configuring the airPoint-PRO in Client Bridge Mode

In this mode the airPoint-PRO is operating as ethernet client, and it can associate only with another airPoint-PRO operating as an access point. In this Mode ***Site Survey*** and ***Link Status Tabs*** of simpleMonitor will be enabled.

Associating with the Access Point - SiteSurvey Tab

Site Survey tab allows you to associate the airPoint-PRO with the Access Points.

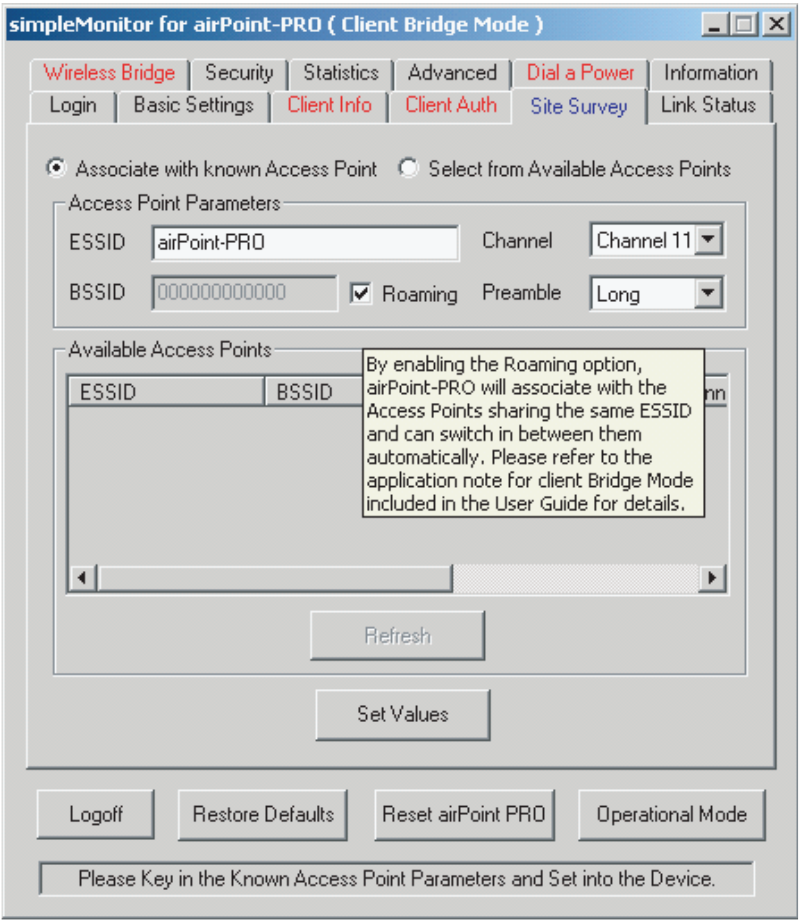
- **Two different Methods are possible for association.**

- **Association with Known Access Point:**
  Enter the values of ESSID, BSSID, Channel, and Preamble for the known Access Point. Click on "Set Values". The simpleMonitor will save the values in the airPoint-PRO. Please use the same WEP Keys same as the Access Point you are connecting with.

  A special roaming option is provided in this mode.

- **Association with Unknown Access Points:**
  If you don't know the Access Points then go for this option. It will show the available Access Points, select one of them and Click on ***Associate***, else double click on the Entry of the Access Point. The airPoint-PRO will try to associate with the Access Point, and gives the suitable message as whether associated or not. Please key in the WEP Keys same as the Access Point you are connecting with.

Note :
airPoint-PRO in Client-Bridge Mode will associate only with those Access points which support "Address 4" field in IEEE 802.11b Specifications.



Configuring the airPoint-PRO in Wireless Bridge Mode

In this mode airPoint-PRO can bridge 2 or more LANs wirelessly. Please select the ***Wireless Bridge Tab*** of simpleMonitor for configuring the airPoint-PRO in Wireless Bridge Mode.

airPoint-PRO in Wireless Bridge has 2 different subMode of operation.

1. **Point to Point**
2. **Point to MultiPoint**

1. **Point to Point**
   This mode lets one airPoint-PRO talk to another airPoint-PRO wirelessly linking two Ethernet LANs together. A feature in this mode is that each airPoint-PRO must specify the MAC address of the airPoint-PRO at the opposite end of the wireless bridge. When the airPoint-PRO is set to this mode, it can't talk to Access Point clients.

2. **Point to MultiPoint**
   This mode lets multiple airPoint-PRO linking multiple Ethernet LANs. In order to bridge multiple LANs, simply key in the MAC address of the Network Bridges on different LANs into the corresponding authorization tables.

Note :- Upto 680 LANs can be authorized simultaneously.

The authorized LAN table can be retrieved from the airPoint-PRO by using "Read Table" option". If the entries are found then it will be displayed on the screen or one need to key in the entries. Entries can be entered one by one manually or by using the entries in the file.

Configuring the airPoint-PRO in Repeater Mode

In this Mode airPoint-PRO radio act as Access Point and ethernet client simultaneously. The Access Point serves the local clients and client connects to the parent Access Point. ***Client Info***, ***Client Auth***, ***Site Survey*** and ***Link Status Tabs*** of simpleMonitor will be enabled on this mode.

Associating with the Access Point - SiteSurvey Tab

Site Survey tab allows you to associate the airPoint-PRO with the Access Points.

- **Two different Methods are possible for association.**

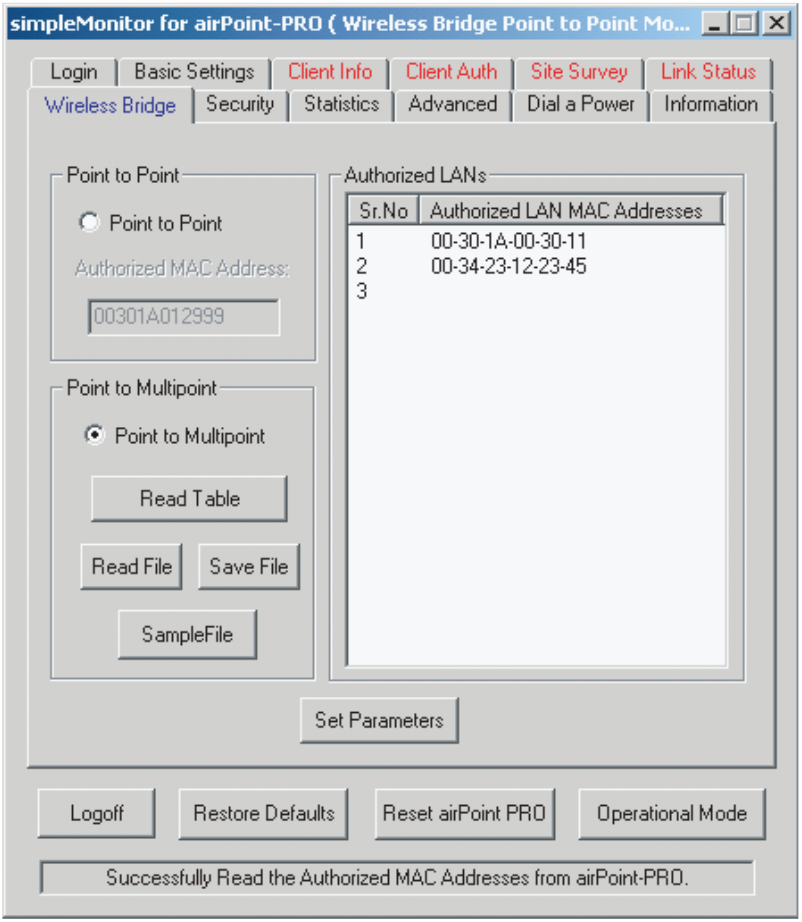
- **Association with Known Access Point:**
  Enter the values of ESSID, BSSID, Channel, and Preamble for the known Access Point. Click on "Set Values". The simpleMonitor will save the values in the airPoint-PRO. Please use the same WEP Keys same as the Access Point you are connecting with.

  A special roaming option is provided in this mode.

- **Association with Unknown Access Points:**
  If you don't know the Access Points then go for this option. It will show the available Access Points, select one of them and Click on ***Associate***, else double click on the Entry of the Access Point. The airPoint-PRO will try to associate with the Access Point, and gives the suitable message as whether associated or not. Please key in the WEP Keys same as the Access Point you are connecting with.

Repeater in Access Point Role
The operation will be exactly same as Access Point serving the local clients, Access Point Mode information is equally applicable in this role. Please refer to Access Point Configuration details in Access Point Mode Section.

Repeater in Wireless Client Role
The operation will be exactly same as WIFI Client associating with the Parent Access Point. Hence you can get the Associated Access Point's information in real time.



5. **Dial a Power**

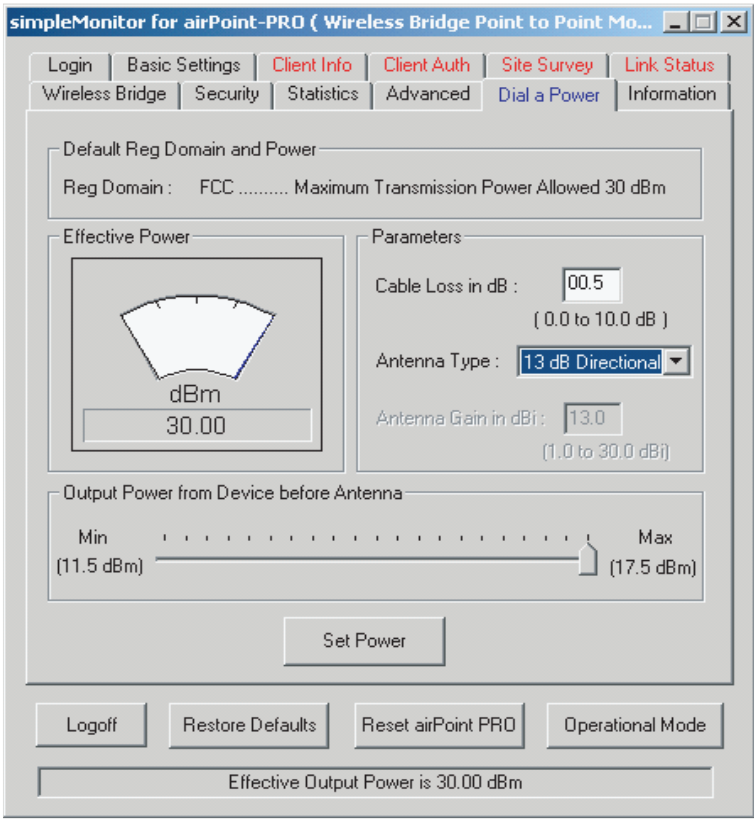
Changing the output Power of airPoint-PRO

Select ***Dial a Power Tab*** of simpleMonitor to change the output power of airPoint-PRO.

This feature of airPoint-PRO allows the user to control the radio transmit power of the airPoint-PRO from the SimpleMonitor software. Make use of the user interface controls in this Tab to adjust the radio transmit power. Dial a Power facility is available only if you login as Administrator.

1. Select the antenna connected to airPoint-PRO from Antenna Type drop down list, if you happen to select the Custom Antenna, please enter the Valid Gain. The limit is 1.0 dBi to 30.0 dBi.

2. Specify Cable Loss value in the Edit box. The limits for this value are min 0.5 dB, max 10.0 dB.



Restore Factory Default Settings

If you forget the critical settings like WEP or Administrator Password of the airPoint-PRO, you can restore the airPoint-PRO to the Factory Default Settings as,

1. Make sure that the Power to the airPoint-PRO is ON. (indicated by PWR LED)
2. Locate and Press the ***Restore Default*** button continuously for 30 seconds and starts flashing. (The ***Restore Default*** button is located on the back of powerShot.)
3. The TxRx LED will dim its light intensity for few seconds.
4. Release the button after the TxRx LED restores back to its original bright intensity.
5. After restoring the Factory Default Settings, please configure the airPoint-PRO again.

Recommended for WISP
You can use simpleDeploy™ to configure the Default Factory Settings.

Appendix A

Setting the Temporary IP Address to the PC

1. Click on ***Start*** > ***Settings*** > ***Control Panel***, then ***Network.***
2. Click on the network adapter associated with the TCP/IP and click ***Properties***.
3. Note your current settings in order to restore your TCP/IP configuration.
4. Select ***Specify an IP address*** and enter the following values as per your ***Network Configuration***: e.g.
   - IP – 192.168.0.30,
   - Subnet Mask- 255.255.255.0
   - Default Gateway- 192.168.0.1
5. Click ***OK*** and click ***OK*** again in the Network window.
6. Restart the computer if asked.

Restoring the Original IP Configuration of PC

1. Follow steps 1 and 2 in the instructions in "Setting the Temporary IP Address to the PC".
2. Select either ***Specify an IP address*** or ***Obtain IP address automatically*** and enter in the original values you noted earlier.
3. Click ***OK*** and click ***OK*** again in the Network window.
4. Restart the computer, if asked.

Appendix B

ASCII to Hexadecimal Conversion Table

A	41		L	4C		W	57		h	68		s	73		3	33
B	42		M	4D		X	58		i	69		t	74		4	34
C	43		N	4E		Y	59		j	6A		u	75		5	35
D	44		O	4F		Z	60		k	6B		v	76		6	36
E	45		P	50		a	61		l	6C		w	77		7	37
F	46		Q	51		b	62		m	6D		x	78		8	38
G	47		R	52		c	63		n	6E		y	79		9	39
H	48		S	53		d	64		o	6F		z	7A			
I	49		T	54		e	65		p	70		0	30			
J	4A		U	55		f	66		q	71		1	31			
K	4B		V	56		g	67		r	72		2	32			

Operating Temperature Range

airPoint-PRO	:	0 °C ~ +50 °C (+32 °F ~ +122 °F)
airPoint-PRO Outdoor / TOTAL	:	-40 °C ~ +65 °C (-40 °F ~ +150 °F)
Ingress Specification	:	IP65 for airPoint-PRO Outdoor / TOTAL

Products and model numbers

sB2510	airPoint-PRO™ Outdoor FCC and CE versions
sB2520	airPoint-PRO™ TOTAL FCC version 13 dBi antenna
sB2525	airPoint-PRO™ TOTAL CE version 9 dBi antenna

Note:
Please refer to the User Guide found on the Setup CDROM for detailed and additional information.

For the latest Quick Install Guide and software updates, please visit our support webpage at
http://www.smartbridges.com/support/